Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A zinc or zinc alloy electroplating bath comprising:

zinc ions and a brightening agent, the brightening agent comprising at least one polyamine er a mixture of polyamines, the at least one polyamine er mixture of polyamines including consisting essentially of a first repeating unit that has the general formula:

$$\begin{array}{c} \begin{matrix} R_1 \\ - \\ N_2^+ \\ - \end{matrix} \\ (CH_2)_x \cdot N_y \\ \begin{matrix} A_1 \\ - \end{matrix} \\ N_1^+ \\ - \end{matrix} \\ (CH_2)_x \cdot N_2^+ \\ - \end{matrix} \\ (CH_2)_y - \end{matrix}$$
 (1)

and a second repeating unit that has the general formula:

$$\begin{array}{c} R_{1} \\ -N_{-} \\ C \\ R_{2} \end{array} + \begin{array}{c} A_{1} \\ C \\ N_{-} \\ C \\ N_{-} \end{array} + \begin{array}{c} A_{1} \\ C \\ N_{-} \\$$

where Δ_1 is O, N, or S; x is an integer from 2 to 6; y is an integer from 1

to 6; z is an integer from 1 to 6; <u>and</u> R_1 , R_2 , R_3 , and R_4 , which is the same or different, is methyl, ethyl, isopropyl, n-propyl, hydroxyethyl, or -

CH₂CH₂(OCH₂CH₂)_mOH; <u>and</u> m is a number between 0-6; wherein the first repeating unit and the second repeating unit are in the same polymer chain.

Claim 2 (Original): The zinc or zinc alloy electroplating bath of claim 1, the first repeating unit having the following formula:

$$\begin{array}{c} CH_3 \\ \begin{matrix} I \\ \end{matrix} \\ \begin{matrix} -N^{+} \\ \end{matrix} \\ CH_3 \end{matrix} \\ CH_3 \\ \begin{matrix} C \\ \end{matrix} \\ \begin{matrix} C \\ \end{matrix} \\ \begin{matrix} C \\ \end{matrix} \\ \begin{matrix} -N^{+} \\ \end{matrix} \\ (CH_2)_3 \\ \begin{matrix} N^{+} \\ \end{matrix} \\ (CH_2)_3 \\ \begin{matrix} -N^{+} \\ \end{matrix} \\ (CH_2)_3 \\ \end{matrix} \\ (CH_2)_3 \\ \begin{matrix} -N^{+} \\ \end{matrix} \\ (CH_2)_3 \\$$

Claim 3 (Withdrawn): The zinc or zinc alloy plating bath of claim 1, the brightening agent comprising a mixture of polyamines, the mixture of polyamines including a first polyamine of the general formula:

and a second polyamine of the general formula:

Claim 4 (Withdrawn): The zinc or zinc alloy plating bath of claim 1, the brightening agent comprising a mixture of polyamines, the mixture of polyamines including a first polyamine of the general formula:

$$\begin{array}{c} CH_3 \\ V_2^{+} \\ CH_3 \\ CH_3 \end{array} \\ \begin{array}{c} NH \\ C \\ N \\ CH_2 \\ N \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_2 \\ N \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_2 \\ N \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_2 \\ N \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ CH_$$

and a second polyamine of the general formula:

$$\begin{array}{c} \begin{array}{c} CH_3 \\ - \begin{array}{c} CH_3 \\ N^{\frac{1}{2}} \\ CH_3 \end{array} \end{array} \begin{array}{c} NH \\ C \\ N \end{array} \begin{array}{c} CH_2 \\ N \end{array} \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \end{array} \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \end{array} \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ CH_3 \end{array} \begin{array}{c} CH_3 \\ CH_3 \\ CH_3 \\ CH_3 \end{array} \begin{array}{c} CH_3 \\ CH_3$$

Claim 5 (Cancelled):

Claim 6 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 1, the polyamine having the following general formula:

$$\begin{bmatrix} R_1 & R_3 & R_1 & NH & R_3 \\ -\frac{1}{2} - \frac{1}{2} - \frac{$$

where R₇ is an alkylene group.

Claim 7 (Original): The zinc or zinc alloy electroplating bath of claim 1, the polyamine having the following general formula:

where v is an integer greater than 1.

Claim 8 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 1, the polyamine having the following general formula:

Claim 9 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 1, the polyamine having the following general formula:

Claim 10 (Withdrawn): A zinc or zinc alloy electroplating bath comprising:

zinc ions and a brightening agent, the brightening agent comprising at
least one polyamine or a mixture of polyamines, the at least one polyamine or
mixture of polyamines including a first repeating unit that has the general formula:

$$\begin{array}{c} CH_3 \\ \downarrow \\ -N^+ \\ CH_2)_3 \cdot N \\ CH_3 \\ \end{array} \\ \begin{array}{c} CH_3 \\ N - (CH_2)_3 \cdot N \\ + (CH_2)_3 - (CH_2$$

and a second repeating unit selected from the group consisting of:

and combinations thereof;

where Δ_1 is O, N, or S; Δ_2 is O, N, or S, and $\Delta_2 \neq \Delta_1$; x is an integer from 2 to 6; y is an integer from 1 to 6; z is an integer from 1 to 6; R₁, R₂, R₃, and R₄, which is the same or different, is methyl, ethyl, isopropyl, n-propyl, hydroxyethyl, or $-\text{CH}_2\text{CH}_2\text{(OCH}_2\text{CH}_2\text{)}_m\text{OH}$; m is a number between 0-6; R₅ represents a group of atoms necessary to complete a heterocyclic compound having a five or six membered ring containing at least two nitrogen atoms, and R₆ is nothing or an alkyl

group, wherein the first repeating unit and the second repeating unit are in the same polymer chain.

Claim 11 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the second repeating unit comprising:

Claim 12 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the second repeating unit comprising:

$$\begin{array}{c} \text{CH}_3 & \text{NH} & \text{CH}_3 \\ \text{I} & \text{CH}_2 \\ \text{N}^{+-} (\text{CH}_2)_3 \cdot \text{N} & \text{C} \\ \text{CH}_3 & \text{CH}_2 \\ \text{CH}_3 & \text{CH}_3 \\ \end{array} .$$

Claim 13 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the second repeating unit comprising:

Claim 14 (Withdrawn): The zinc or zinc alloy plating bath of claim 10, the brightening agent comprising a mixture of polyamines, the mixture of polyamines including a first polyamine of the general formula:

and a second polyamine selected from the group consisting of:

$$\begin{array}{c} \begin{array}{c} CH_3 \\ N^{\pm} \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_2 \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_3 \end{array} \\ \begin{array}{c} N \\ CH_3 \\ OH \end{array} \\ \end{array} \\ \begin{array}{c} N \\ CH_3 \\ OH \end{array}$$

$$\begin{array}{c} \begin{array}{c} & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

Claim 15 (Cancelled)

Claim 16 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the polyamine having the following general formula:

where R₇ is an alkylene group.

Claim 17 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the polyamine having the following general formula:

where v is an integer greater than 1.

Claim 18 (Withdrawn): The zinc or zinc alloy electroplating bath of claim 10, the polyamine having the following general formula:

Claim 19 (Withdrawn): A brightening agent for an alkaline zinc or zinc alloy electroplating bath, the brightening agent comprising a copolymer of a first monomer having the following formula:

$$\begin{array}{c} R_1 \\ N - (CH_2)_x \cdot N \\ R_2 \end{array}$$

and a second monomer comprising at least two of the following compounds selected from the group consisting of:

where Δ_1 is O, N, or S; Δ_2 is O, N, or S, and $\Delta_2 \neq \Delta_1$; x is an integer from 2 to 6; R₁, R₂, R₃, and R₄, which is the same or different, is methyl, ethyl, isopropyl, n-propyl, hydroxyethyl, or -CH₂CH₂(OCH₂CH₂)_mOH; m is a number between 0-6; R₅ represents a group of atoms necessary to complete a heterocyclic compound having

a five or six membered ring containing at least two nitrogen atoms; R_6 is nothing or an alkyl group; R_7 and R_8 , which may be the same or different, is an alkylene group; and X_1, X_2 , and X_3 , which is the same or different, is a halogen.